ARTICLE XI.

DISLOCATION OF THE HIP IN CHILDREN: A REPORT OF TWO CASES WITH REMARKS. By V. P. GIBNEY, A.M., M.D., of the Hospital for the Ruptured and Crippled, New York.

THE occurrence of this accident in children is of sufficient rarity to justify me in placing on record two cases alike as to kind yet unlike as to etiology. The one is purely traumatic, and apart from the age of the subject is interesting in a diagnostic point of view as well as in the fact that *six weeks* elapsed before its reduction; the other is a spontaneous dislocation with the early stage of hip disease.

CASE I. *Traumatic Dislocation in a Child aged* 4 *years; Reduction at end of six weeks by Manipulation; Perfect Restoration.*—On the morning of June 24, 1878, Mrs. F., of Williamsburg, brought her boy Alexander, æt. 4 years, into the out-door department of the hospital, and, from the degree of care with which she handled the child, I suspected some acute disease about one of the larger joints. He could not be induced to stand unless well supported, would make no attempt to walk, was thin, and to all appearance a sufferer. He was, moreover, exceedingly cross, and an examination thoroughly satisfactory was impracticable. I did find, however, as he lay upon the table, a rotation inwards of the right thigh with flexion to an angle of at least 120° and a strong degree of adduction. The knee of this side rested across the lower third of left thigh, the trochanter was unusually prominent, and rested on a higher plane than that of left side, the outline of the head of the thigh-bone I fancied could be distinctly made out on the dorsum ilii, and the length of the limb I made out to be between three-quarters and one inch less than that of its fellow. I could make flexion over a small arc, and extend to an angle of about 140° without causing any pain, but I could not make any abduction. I learned from the mother that five weeks before this date the child was free from any lameness or sign of disease, that he was playing in the yard at that time, when he fell into a cellar, the door of which had been left open, was picked up by a neighbour and carried into the house crying considerably with pain in his hip; that he was unable to use his limb, and that a degree of deformity existed, so much so, that she called in a doctor, who is reported to have examined the case very carefully and to have found nothing demanding any urgent treatment, but to have ordered the child to bed with limb extended and a pillow between the knees. Since the accident the patient was reported to have rested well at night and to have suffered very little pain.

I had no hesitancy in making a diagnosis of dislocation on the dorsum ilii, and advised the mother to place the child in the hospital. This she declined to do without seeing her husband, and she took the child home to consult his wishes in the matter. She did not report for several days, and then she was unwilling to leave the child. She begged that I treat it as an out-door patient. The case was of such extreme interest that I determined to make the attempt at reduction, and, on the evening of June 29, I had my friend Dr. Jno. H. Ripley, of this city, see the patient with me. He fully confirmed the diagnosis I had already made, and we proceeded at once to reduce the dislocation. Chloroform was administered, and when anæsthesia was complete, the limb was rotated, while the thumb and fingers grasped the head of the thigh-bone, which could be felt to roll distinctly. The doctor made out the same shortening that I had made out some days previously. With the aid of a towel I held the pelvis quite securely, while Dr. R. manipulated the limb. He flexed the thigh acutely on abdomen, rotated inward, then extended. This was of no avail. He then flexed and abducted and extended, and the deformity remained the same. Every possible manœuvre was resorted to, and for fully one hour we worked without any success whatever. Finally, after a strong adduction and careful extension, the bone could be felt under one's fingers to slip into place. There was no noise made, and we were only assured of our final success by finding the limbs parallel, equal in length, and the movements at the joint normal. A double spica bandage was applied, the limbs bandaged together, straight splints having been bound in popliteal space, and a pad having been placed between the knees. An opiate was ordered for the night.

July 1. Find child free from pain, and the mother reports that after the first night he rested very well. The bandages are removed to-day and the limbs remain quite straight; passive motion made with comparative ease and the dressings re-applied. An enema is ordered.

6th. Mother brings child to the dispensary to-day and reports that he has rested well and been free from pain since I saw him last (July 1). The limbs are of equal length, and both lie straight and parallel, one with the other. There is a moderate degree of resistance to complete extension, flexion, and adduction, though the thigh can be moved in flexion over an arc of about 90° with ease, and rotation can be made with the same degree of facility. Only a spica worn now.

11th. Continues to improve. Occasionally has a "catching pain" as he walks.

24th. Flexion can be made over the normal arc; rotation not quite perfect. Walks much, and a very slight halt is observable.

Aug. 3. Walks and runs quite freely, and I cannot detect any halt in his gait. The mother says she cannot tell by his walking which is the lame limb. Flexion and extension perfect and painless; rotation nearly so; a scarcely appreciable change in the nates; no atrophy; no shortening; general health good.

Jan. 8, 1879. In tracing out some cases I called at the residence of this patient and found that he had been free from any pain or lameness since the date of his last visit (Aug. 3). I had him stripped, and on a thorough examination I could find no symptom or sign of disease about the joint. His rotation was perfect.

Dr. Hamilton, while regarding dislocation in a child at this age as rare, very truly remarks:[1] "Coxo-femoral dislocations may occur at any period of life." I find by reference to modern literature of the subject that the accident has happened to children as young as eighteen months. It is quite unnecessary for me to refer to the cases under ten years, or under six even, that have been reported within the past few years. The text-books on surgery contain such as are well authenticated.

It seemed difficult to imagine how any error in diagnosis could have occurred, and yet such appears to have been the case. There was certainly the history of the fall, the deformity and the acuteness of invasion. We are taught that hip disease comes from a fall, and hence the average practitioner feels satisfied when he gets this etiological factor. He seems to forget that hip disease goes through stages, and that a *long time* must elapse before such a deformity as was described in this case can take place.

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[1] Fractures and Dislocations, Philadelphia, 1875, p. 673.

If this injury were not severe enough to induce an arthritis, then it is useless to talk of falls as causing hip disease. It is fair to assume that the ligamentum teres was either torn across or severely stretched, and we must admit a certain amount of injury done the capsular ligament. Then, too, the bruising and pulling and tortion that was incident to the efforts at reduction were certainly sufficient to cause disease in the joint, even if it had already escaped permanent injury.

There are cases, it is true, wherein violent inflammatory reaction has followed prolonged manipulation in the effort at reduction.

The period of time that had elapsed in this instance was not sufficient to justify me in dismissing the case without an attempt to restore the head of the bone to the acetabulum. Sir Astley Cooper fixed eight weeks as the limit beyond which it is dangerous to make the attempt. Most all authors dwell on the dangers attendant thereon, and cite numerous examples. For a full history I need only refer my readers to that classical work with which every tyro even in surgery should be familiar, viz.: Hamilton on Fractures and Dislocations, to which reference has already been made.

One other point in connection with this case, and I pass to the narration of the second. The head slipped in without that well-known "click" so pleasing to the ear of the operator. In many of the reported cases of ancient dislocation reduced, I see almost invariable mention of this "click" as occurring, however late the reduction.

Erichsen states in speaking of the effects of a dislocation left unreduced :—

> "If the articulation be an orbicular one, as the shoulder or hip, the cavity, whether glenoid or acetabular, undergoes very gradual changes in outline and depth; its circumference becomes contracted, less regular, more angular, and the hollow eventually shallows. These changes are so slow in the adult that several years will elapse before they have gone to such a degree as to prevent the displaced head of the bone from being put back. In *children* and *young people* [my own italics] they are more rapid and complete, and the cavity fills up with a dense fibrous deposit."[1]

CASE II. *Spontaneous Dislocation occurring in the early stage of Hip Disease ; Reduction.*—During the month of May of the present year a female patient aged nine years, was in the hospital convalescing from a recurring acute attack of hip disease. She had for some weeks been walking and running about with scarcely a halt in her gait, when on May 26th a member of the house staff observed a shortening of the limb, and a refusal on the part of the child to walk. Dr. Knight's attention was called to the case, and an examination revealed an unmistakable dislocation on the dorsum ilii. The limb was shortened one inch, was apparently much shorter, the thigh was semi-flexed, rotated inward, and adducted. A few days before this the limbs were of equal length, and were free from any deformity. The child reported that she fell out of her bed a night or two previously, but on a careful investigation, this was found impracticable, as the beds in the dormitory are so close one to the other, that a child could not fall between them. Furthermore, on questioning both the day nurse and the night nurse, as well as the children who sleep contiguous, no one saw her fall from the bed, and all are positive that she did not.

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[1] The Science and Art of Surgery, Phila., 1878, vol. i. pp. 458, 459.

I was in the country at this time, and as I was expected home every day Dr. Knight postponed the reduction until my return.

May 30. Chloroform administered and the diagnosis was fully confirmed. After a few minutes at manipulation, the head of the femur slipped into place without any "click." Measurement made, and limbs found equal in length. While applying a roller about the hips, the head of the bone slipped again but was easily replaced. No grating could be felt. Extension by weight was made, and during the day she suffered considerable pain in paroxysms.

31*st*. Limb retained in position, though the child required an opiate to secure rest through the night.

June 2*d*. Extension removed, firm spica applied with pad above trochanter and child carefully placed in a rolling chair.

4*th*. Doing well; pains not so great.

14*th*. Since date of last note the case has progressed as well as we could expect. The dressings have been carefully removed and reapplied every other day to avoid excoriations. Any movements at the joint have caused the child to scream aloud. This noon while passing through the ward, I observed the limb sharply flexed, adducted, and rotated inward, along with a marked degree of shortening. An anæsthetic was administered, and I could feel the head of the bone distinctly on the dorsum, and made out one and a half inch shortening. It was easily reduced and child placed in bed with usual precautions.

15*th*. This morning the hip is dislocated again. Dr. Ap. M. Vauce, a member of the staff, makes a splint of Manilla paper and glue in the same manner as he makes his spinal jackets. He gets his cast from a boy whose limb is equal in length and size to our patient's, and the whole dressing dries and is ready for application by this evening.

16*th*. Splint applied after reduction is made; it grasps the pelvis in a broad band, and completely encases thigh and knee and is held securely by a lacing in front throughout the whole length.

22*d*. We have had no difficulty with the limb since the paper splint was applied. The child goes about now quite freely by aid of a chair. We have had no excoriations.

July 30. Date of present writing. Limb equal in length with its fellow. No deformity, child free from pain, and case in every way doing well.

The history prior to the dislocation is of much interest in illustrating the peculiar course taken by the hip-disease, and is as follows:—

Aug. 13, 1877, she was admitted to the hospital, and nothing reliable could be learned concerning the health of either father or mother. The patient herself was one of fifteen children, six of whom had died of the ordinary diseases of infancy. She was healthy during infancy, and a pertussis at the age of four without a sequel was all the disease she had ever had.

Four months ago she began to limp and complain of pain in the left ankle. She is reported to have sustained a slight fall about this time, and to this accident was attributed her lameness.

On admission she is found fairly nourished, stands squarely on both feet, and walks quite freely, though favouring left side. The spinal column is normal to the usual tests; the left nates is flattened a little while the fold is unchanged; no tenderness on pressure in groin or over trochanter, and the child does not complain of pain if pressure be made at any point around hip or along thigh; no single muscle or group of muscles shows any contraction. In the dorsal decubitus (examination made on the hard floor) the thigh can be completely extended without resistance; ab- and adduction easily performed but there is resistance to complete flexion, although the child does not complain of pain; no atrophy of thigh or leg, and no shortening. A diagnosis of hip disease first stage was made and the treatment was expectant.

Oct. 2. Not an outward symptom or sign has developed since her admission; even those present then have subsided, and we are disposed to question the diagnosis. Discharged this day without any evidence of disease or deformity.

March 12, 1878. Readmitted this date. Unable to walk without great difficulty, and in this act leans forward and rests hand on the knee. The relapse is of two weeks' standing. About six weeks ago she had scarlatina with enlarged cervical glands as sequel. The thigh is flexed at 90° and is rotated outwards. There is no especial fulness or induration about the trochanter or in the groin.

14*th.* Has cried much with pain during the past two nights, and fly blister to the hip is applied. Poultices to follow.

22*d.* Since date of last note has experienced great relief: walks with a mere trace of a limp, has no pain at nights, the limb is perfectly straight, motion at the joint is good, and there is scarcely any appreciable change in the nates.

Aug. 5. Has had no sign of relapse since last spring. She has just returned from a visit home, and would be discharged but for an occasional halt in her gait, and a resistance to complete flexion.

March 15, 1879. Condition unchanged and we still hesitate about granting a discharge.

17*th.* For past two days has been very lame, and the limb is apparently lengthened. This is the season when the "walking mania" is at its height, and her relapse is possibly due to over-exertion, as the children in the hospital have caught the infection. Rest is enjoined.

23*d.* Relieved, and her condition is now as it was before the 15th.

She continued thus apparently cured until the date of the dislocation in May, which has already been fully described.

Commenting on this case, I feel no hesitancy in predicating spontaneous of this dislocation. Whether it occurred as the child was falling asleep or towards morning I am unable to state. The case reported by Mr. Hilton[1] was one wherein the dislocation occurred just as the patient was falling asleep; and commenting on this he says:—

"Here I think it worthy of a passing consideration to inquire why it is that these dislocations from disease almost always occur just as the patient is falling off to sleep. It is then that volition has withdrawn its influence from the nervous system generally, and the excito-motor function of the spinal cord seems to obtain an exclusive authority over the limbs, and produces the involuntary spasmodic condition of the muscles which causes these displacements."[1]

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[1] Lancet, vol. ii., 1868, p. 2, also in "Lectures on Rest and Pain."

The case I have reported differs from most of those already on record. Until the remarkable paper of Dr. Alden March in 1853, before the American Medical Association, dislocation of the hip in hip disease was regarded by nearly all of the surgical authorities as of frequent occurrence. It was of so frequent occurrence, said they, that we must expect nothing else in the advanced stage of the disease. Dr. March took the position that "*spontaneous dislocation of the hip* (as *purely* the *result of morbid action unaided by superadded violence*) *seldom or never takes place;*"[2] and he proved his position by overwhelming evidence. He stated that the symptoms which are usually relied on during life as diagnostic of an idiopathic dislocation can be explained "in the strongly marked organic changes in the form and relations of the head of the femur and acetabulum."[3] I have myself demonstrated another element in the production of this deformity, with specimens presented at the New York Pathological Society,[4] viz., a change in the angle which the neck sustains to the femur —in disease the angle is changed sometimes from an obtuse to an acute angle.

In a pretty careful search through such literature as I have at hand I am unable to find any cases recorded wherein the dislocation occurred in the early stage of the disease, and one might say that the case I have reported was not one in point. The facts are: signs of disease beginning in May, 1877; gradual disappearance of every sign by October 2 of same year; perfect immunity from lameness or deformity until February, 1878; scarlatina, and relapse of disease at hip; re-admission to hospital with acute symptoms; almost perfect recovery within a month, and this condition maintained for one year; then the dislocation coming on at night. It will be seen that she never passed to the stage of abscess, and that at the time of the accident there was very little evidence of any disease whatever about the joint. When, then, I say in the early stage, I speak relatively. Last spring I assisted my friend, Dr. Poore, of this city, in making an autopsy on a child who died of this disease after a few months' illness. The right hip had become spontaneously dislocated a short time before death, and the doctor and myself found it easily dislocated shortly after the slipping was observed by the nurse. We found the capsular ligament intact, but the ligamentum teres destroyed by ulceration. Dr. Poore has the specimens in his possession, and will publish a full report of the case at no distant date. The conclusion to be drawn, then, is that in the case

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[1] On Rest and Pain, N. Y., 1879.

[2] Trans. Am. Med. Assoc., 1859, p. 479.

[3] Loc. cit., p. 479.

[4] Medical Record, vol. xii. p. 253.

I have reported the ligamentum teres must have been destroyed, and the absence of crepitation would seem to limit the disease as yet to the soft parts, and more especially to the ligament. The absence of the "click," too, would aid us in locating the lesion.

One point of interest to the pathologist, and I have done. If hip disease begin, as is claimed by some authorities, in the soft parts within the acetabular cavity, why do we not have more dislocations in the early stage? It certainly cannot be that such accidents are prevented by the early use of mechanical appliances; for, as yet, the major portion of patients suffering with this disease either have no apparatus, or have apparatus so abused in its application that it practically amounts to harm. I report this case as a rare case, and the rarity is due, in my opinion, to the infrequency with which the disease begins in the soft parts. The far greater number of cases of hip disease, I am convinced from observations extending over several years, begin as an osteitis of the head, of the neck, or of the acetabulum.

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Article XII.

A Contribution to the Study of True Adenoma of the Mamma.

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Under the term adenoma, or some of its synonyms, as tumeur adénoïde, hypertrophie partielle, adenocele, or mammary glandular tumour, Birkett, Broca, Velpeau, Lebert, Bryant, and Paget have described growths which differ widely in their genesis, intimate nature, and clinical features, and which are composed, for the most part, of the remains of preëxisting lacteal glands contained, but widely separated, in a fibromatous, sarçomatous, or myxomatous stroma. The above names would naturally lead one not familiar with modern histological research to infer that tumours developed at the expense of the secreting structure of the breast are of very frequent occurrence, while the fact is that there is not a single neoplasm of that organ which is so uncommon,[1] and about which so little is known as genuine adenoma. Many noted pathologists have never met with it, and it is very certain that the peculiarities in its life are lost in the writings of the authors that I have mentioned. As I have had an opportunity of examining two specimens, I am induced to lay the results of my investigations

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[1] I have seen true adenoma only once out of 115 tumours of the breast, of which I have kept a record, and Billroth (*Chir. Klinik*, Zurich, 1860–67, and Wien, 1869–70) records only one example out of 102 mammary growths.